

Claims:

1. A method for displaying frames, said method comprising:

fetching a first line from a top field;

fetching a first line from a bottom field corresponding to the top field, after fetching the first line from the top field; and

fetching a second line from the top field after fetching the first line from the bottom field, the second line from the top field being adjacent to the first line in the top field.

2. The method of claim 1, wherein fetching the first line from the top field further comprises:

calculating a starting address for a row of luma pixels;

and

calculating a starting address for a row of chroma pixels.

3. The method of claim 2, wherein fetching the first line from the top field further comprises:

calculating a starting address for another row of chroma pixels, wherein the another row of chroma pixels is adjacent to the row of chroma pixels.

4. The method of claim 3, further comprising:

interpolating a chroma line from the row of chroma pixels and the another row of chroma pixels.

5. The method of claim 3, wherein fetching a line from the bottom field further comprises:

calculating a starting address for a row of luma pixels;

calculating a starting address for a row of chroma

pixels; and

calculating a starting address for another row of chroma pixels.

6. The method of claim 5, wherein fetching a line from the bottom field further comprises:

interpolating a chroma row from the row of chroma pixels and the another row of chroma pixels.

7. The method of claim 6, wherein fetching a second line from the top field further comprises:

calculating a starting address for a row of luma pixels;
calculating a starting address for a row of chroma pixels;

calculating a starting address for another row of chroma pixels, wherein the another row of chroma pixels is adjacent to the row of chroma pixels; and

interpolating a chroma row from the row of chroma pixels and the another row of chroma pixels.

8. A system for displaying frames, said system comprising:

- a first memory for storing a top field;
- a second memory for storing a bottom field, the bottom field being associated with the top field; and
- a feeder for fetching a first line from the top field, fetching a first line from a bottom field corresponding to the top field after fetching the first line from the top field, and fetching a second line from the top field after fetching the first line from the bottom field, the second line from the top field being adjacent to the first line in the top field.

9. The system of claim 8, wherein the feeder further comprises:

- a line address computer for calculating a starting address for a row of luma pixels and calculating a starting address for a row of chroma pixels.

10. The system of claim 9, wherein the line address computer calculates a starting address for another row of chroma pixels, wherein the another row of chroma pixels is adjacent to the row of chroma pixels.

11. The system of claim 10, wherein the pixel feeder further comprises a chroma filter for interpolating a chroma line from the row of chroma pixels and the another row of chroma pixels.

12. The system of claim 10, wherein the line address computer calculates a starting address for a row of luma pixels, calculates a starting address for a row of chroma pixels, and calculates a starting address for another row of chroma pixels.

13. The system of claim 12, wherein the chroma filter interpolates a chroma row from the row of chroma pixels and the another row of chroma pixels.

14. The system of claim 13, wherein the line address computer calculates a starting address for a row of luma pixels, calculates a starting address for a row of chroma pixels, calculates a starting address for another row of chroma pixels, wherein the another row of chroma pixels is adjacent to the row of chroma pixels, and wherein the line address computer interpolates a chroma row from the row of chroma pixels and the another row of chroma pixels.